

Appl. No. 10/692,972
Amndt. Dated December 6, 2006
Reply to Office Action of September 6, 2006

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REMARKS

This is a full and timely response to the non-final Office action mailed September 6, 2006. Reconsideration of the outstanding rejections in view of the foregoing amendments and following remarks is respectfully solicited.

Claims 1, 6-13, and 15-30 are pending in this application, with claims 1, 8, 11, 15, 19, and 29 being the independent claims. Claims 1, 8, 10, 11, 13, 15-17, 19-23, 25, 26, 29, and 30 have been amended. Claims 2-5 and 14 have been canceled. No new matter is believed to have been added.

Claim Amendments

Claim 1 has been amended to incorporate the elements of claims 2-5. Claims 11 has been amended to incorporate the elements of claim 14. Claims 8, 10, 13, 15-17, 19-23, 25, 26, 29, and 30 have been reviewed and amended to correct minor informalities.

Rejections Under 35 U.S.C. § 101

Claims 29 and 30 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. Claims 29 and 30 have been amended to more positively recite statutory subject matter. Specifically, the preambles of claims 29 and 30 have been amended to recite "computer-readable media." It is respectfully submitted that claims 29 and 30 comply with 35 U.S.C. § 101, particularly as discussed in MPEP 2106.

Rejections Under 35 U.S.C. § 103

Claims 1-7 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over U.S. Patent No. 6,665,316 to Eidson ("Eidson") in view of U.S. Patent No. 6,133,846 to Birkedahl et al. ("Birkedahl"). This rejection is respectfully traversed, particularly in view of the present amendments.

Eidson is cited for disclosing all of the elements of independent claim 1 except for a redundant bus system. Birkedahl is cited for disclosing a redundant bus system, and the Examiner alleges that it would be obvious to incorporate the redundant bus system of Birkedahl into the system of Eidson for "more reliable communication."

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Claim 1 has been amended with the features of 2-5, and recites:

wherein each said timing server is configured to transmit, receive, and monitor synchronization signals from each of said first and second pluralities of timing servers, each said counter is responsive to the failure of the timing master to initiate counting from a starting point to count toward each respective stored unique constant, and each said timing server is further configured to transmit a master timing synchronization signal when said counter in said timing server has completed counting to said unique constant stored in said timing server.

In the rejections of claims 2-5, Eidson is cited for disclosing this combination of elements. Eidson discloses a distributed system 10 that includes a plurality of nodes 20-24, one of which functions as a master clock for the system 10 while the rest function as slave clocks. (Eidson, FIG. 1, col. 2, lines 24-29). The master clock periodically generates a timing data packet and transfers it via a communication link 12 to the slave clocks. (Eidson, FIG. 1, col. 2, lines 30-32). FIG. 2 of Eidson illustrates the selection protocol for determining which node 20-24 is selected as the master clock. Initially, each of the nodes 20-24 assumes that it is the master clock and begins transferring the timing data packets. (Eidson, FIG. 2, col. 3, lines 16-18). After waiting for the detection of timing data packets from other nodes, each node evaluates the received timing data packets to determine the "best" master clock and whether to synchronize to one of the received timing data packets or to use the local clock within the particular node. (Eidson, FIG. 2, col. 3, line 28 – col. 4, line 31). Each of the nodes judges each of the received timing data packets to determine the best master clock based on a prioritized set of rules. (Eidson, FIG. 2, col. 31-37). In order of priority, the rules for determining the master clock include: whether the master clock information or the local clock information indicates a standard time source; whether the master clock information or the local clock information indicates a traceable time source; whether the master clock information or the local clock information indicates a boundary clock; whether the master clock information or the local clock information indicates a better clock accuracy; and whether the master clock information or the local clock information indicates a lower IUD. (Eidson, col. 4,

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line 38 – col. 5, line 24).

In contrast, claim 1 recites that the timing server is only designated a master clock, and transmits a master timing synchronization signal, when the counter in said timing server has completed counting to said unique constant stored in said timing server. Eidson does not disclose this element. Although Eidson discloses a “unique identifier” for each local clock, as noted by the Examiner, the unique identifier is not analogous to the unique constant of claim 1 and is not utilized in the decision process of determining the master clock. The Examiner particularly cites FIGS. 4 and 5 and col. 7, lines 40–49 of Eidson in the rejection of claims 4 and 5. However, these portions are related to determining a delay associated with the transfer of the timing data packets, not the determination the master clock, but to improve the accuracy of time synchronization between a pair of local clocks.

Accordingly, claim 1 is allowable over the combination of Eidson and Birkedahl. Claims 6 and 7 depend on claim 1 and are allowable at least for that reason.

Rejections Under 35 U.S.C. § 102

Claims 8-30 stand rejected under 35 U.S.C. § 102 as allegedly being anticipated by Eidson. This rejection is respectfully traversed, particularly in view of the present amendments.

Independent claims 8, 11, 15, 19, and 29 each recite elements similar to the combination of elements of claim 1 discussed above. As such, independent claims 8, 11, 15, 19, and 29 are allowable over Eidson for the reasons discussed above. Claims 9, 10, 12, 13, 16-18, 20-28, and 30 depend on one of claims 8, 11, 15, 19, and 29 and are allowable at least for that reason.

Conclusion

The other art of record is also not understood to disclose or suggest the inventive concept of the present invention as defined by the claims.

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Hence, Applicant submits that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

If for some reason Applicant has not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

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